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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/090,404
Filing Date: 04 March 2002
Appellant(s): BUTTERWORTH ET AL.

John L. Rogitz (Reg. No. 33,549)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 08/24/2011 appealing from the Office action mailed 06/07/2011.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief is correct.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

The Board of Patent Appeals and Interferences previously decided an appeal in the present application, reversing the Examiner's rejections of Claims 1-32, on April 5, 2010 (Appeal 2008-003898).

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 6,963,747 B1	ELLIOT	11-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1-33 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by **Elliot (US Patent No. 6,963,747 B1).**

As per claim 1, Elliot teaches plural computer nodes **(Figure 4a)**, each node: determining a system topography; determining an optimum nodal membership based on the topography **(col. 5, lines 64-col. 6, line 7, determination of a schedules based on topology and node traffic information across the network of routers and traffic sources and endpoints via the mapping information)**, the determining of an optimum nodal membership at each of the plural nodes converging with the determining of an optimum nodal membership on each of the other nodes of the plural nodes in the computer system **(col. 1, lines 22-28, 41-45 and col. 9, lines 25-41, where an optimum transmit schedule is determined as indicated by paths through the network for data traffic from source to destinations and where new optimum schedules may be determined dynamically as the traffic flow over the network changes)** with each of the plural nodes arriving at the same optimum nodal membership without having to transmit optimization solutions to the other nodes being used by all nodes in the system **(col. 9, lines 25-41, where nodes compute their own schedules independently and may independently harmonize their schedules).**

As per claim 2, Elliot teaches comprising more than two nodes, the determining of an optimum nodal membership being based on a seed**,** the seed being the same for each node such that each node uses the same seed as every other node in determining the optimum membership, such that the optimum membership arrived at by each node is the same membership arrived at by

every other node **(Referring again to FIG. 3 and col. 7, lines 34-41, initial schedules for the nodes are created at 202. The initial-schedule for a node consists of a string of 1's (denoting when the node may transmit) followed by a string of 0's (denoting when the node must be silent). The string lengths for the schedules of the network nodes may generally be the same. Therefore, the same initial string schedules upon creation, having the same length as well as the same number of 1's in the transmit schedule as the initial schedule).**

As per claim 3, Elliot teaches wherein determining an optimum membership is undertaken using a randomized simulated annealing technique **(col. 1, lines 65-col. 2, lines 8 and col. 9, lines 10-20).**

As per claim 4, Elliot teaches wherein each node includes a link state module undertaking the determining a topology and an optimization module undertaking the determining an optimum membership, the link state module sending the topology to the optimization module **(col. 5, lines 64-col. 6, lines 2).**

As per claim 5, Elliot teaches wherein the link state module at each node communicates with at least one link state module at another node in the system **(col. 5, line 64-col. 6, lines 8).**

As per claim 6, Elliot teaches wherein the link state module communicates with a database of links and nodes **(col. 5, line 64-col. 6, lines 8).**

As per claim 7, Elliot teaches wherein elements in the database are periodically refreshed **(col. 3, lines 60-col. 4, lines 10, updating on schedule information).**

As per claim 8, Elliot teaches wherein each node includes an event manager receiving the optimum membership from the optimization module, the optimum membership being used by the event manager during system operations **(col. and col. 5, lines 55-65)**.

As per claim 9, Elliot teaches wherein the method acts undertaken by the optimization module further include: iteratively determining plural solutions **(see claim 5 and col. 5, lines 1-5, iteratively harmonizing the created schedules until the predetermined level of transmit collisions is obtained and col. 4, lines 62-col. 5, lines 13 where Eliott further discloses the calculation of new transmit schedules (i.e. a plurality of solutions))**; determining which solution is a most desirable solution **(col. 5, lines 1-5)**; returning the most desirable solution responsive to a determination that it is fully connected **(col. 4, lines 29-39)**; otherwise returning a next most desirable solution responsive to a determination that the next most desirable solution is fully connected **(col. 4, lines 62-col. 5, lines 13, the process can be repeated until the number of collisions reaches a predetermined acceptable level.," and for which this process is responsive to determining there is no disconnection (collisions) and therefore fully connected.).**

As per claim 10-17, claims 10-17 recites substantially the same limitations as claims 1 and 3-9, but in device rather than system form. Therefore, the rejection for claims 1 and 3-9 applies equally as well to claim 10-17.

As per claims 18-24, claims 18-24 recites similar limitations as claims 1-5 and 8-9. Therefore, the rejection for claims 1-5 and 8-9 applies equally as well to claims 18-24.

As per claims 25-32, claims 25-32 recites similar limitations as claims 1-5, and 8-9. Therefore, the rejection for claims 1-5 and 8-9. applies equally as well to claims 25-32.

As per claim 33, Elliot teaches a method for providing plural nodes in a system of nodes with a membership that is identical for each node, comprising: providing topology information **(col. 5, lines 64-col. 6, line 7, determination of a schedules based on topology and node traffic information across the network of routers and traffic sources and endpoints via the mapping information)**; providing a respective version of a node membership optimization module to each of plural views, wherein each version of the node membership optimization module determines a node membership and wherein for each view, a view containing a respective local node is selected, the nodes subsequently using the node membership **(col. 7, lines 50-63)**.

(10) Response to Argument

A) "The rejection based on Elliot are clear reversible error. The allegations that col. 5, lines 64-col. 6, lines 7 teaches that "each" node determines an optimal nodal membership is incorrect. Appellant further argues that "Reliance on col. 9, lines 25-41 for the claimed limitation that each node arrives at optimal membership without having to transmit solution to the other nodes likewise does not cure the defect because in this portion of the reference each node gathers information and then synchronizes its schedule with other nodes precisely by sharing the computed schedules..."

As to the above point A), Examiner respectfully disagrees. Examiner notes that while a portion of the cited reference discloses the sharing of computed schedules, it is pointed out to the

Appellant that this is not required by the reference. It is clear that the cited prior art Elliot discloses specifically that "it may be advantageous to have the nodes computer their own schedule, thus having no master node. In these cases, the nodes independently gather the relevant information for computing their schedules." The sharing of the computer schedules is only performed, as show in the prior art in line 28, "if necessary." Therefore, two conditions are disclosed, in the first condition, the nodes computer their own schedules and as part of the second condition, nodes can computer their schedules and share them with other nodes (i.e. in some cases "nodes computer their own schedules...if necessary, the independently computer schedules can be shared..." See col. 9, lines 24-31.

B) **"**Nowhere in the relied-upon portion does Elliot discuss returning a most optimum solution responsive to a determination of full connectedness..."

As to the above argument B), Examiner respectfully disagrees. First, Examiner points outs no where does the claim indicated *what* is full connected and secondly, how one determines what is "most desirable." In this instant case predetermined levels of collisions for the computation of transmit schedules as disclosed in Elliot read upon the desired solution (i.e. the returning of nodes schedules with fewer collisions are most desirable). See col. 4, lines 62-col. 5, lines 13 and col. 4, lines 22-24, where Eliott further discloses the calculation of new transmit schedules (i.e. a plurality of solutions) "New nodes schedules with fewer collisions can be accepted…The process can be repeated until the number of collisions reaches a predetermined acceptable level.," and for which this process is responsive to determining there is no disconnection (collisions) and therefore fully connected. See also, col. 4, lines 45-61. Examiner

suggests Appellant amend the instant claim language to further define any intended specific definitions of "fully connected" or "most desirable" beyond the instant claim interpretation provided.

C) "Claim 33 requires providing a respective version of a node membership optimization module determines a node membership and for each view…"

As to the above argument C), Examiner respectfully disagrees. Examiner submits further detailed claim mappings where Elliot clearly reads upon the broadly claimed limitations where a master node M is selected and each transmit schedule view is disseminated to a small group of related nodes (i.e. the transmitting node and its neighboring nodes). See col. 3, lines 38-col. 4, lines 21. Appellant's should amend the instant claim to explicitly define a "view" to overcome the broad interpretation of the claim language.

(11) Related Proceeding(s) Appendix

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Joiya M Cloud/
Examiner, Art Unit 2444

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/Peling A Shaw/
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